

Message

From: Steven Stout [Steven.Stout@tn.gov]
Sent: 8/11/2021 4:00:58 PM
To: Amoroso, Cathy [Amoroso.Cathy@epa.gov]
Subject: mixing zone material
Attachments: ATT00001.txt; mixing zones 2021.docx; RE: Revised ETPP Waste Water Discharge Calculations ; F.0600.029.0701 3312016 D2 FFS TDEC comments.pdf

Cathy-

This issue is not super-relevant to ETPP since the treatment will should reach concentrations so low that the discharge would not need any dilution to meet a water quality standard approach , risk-based approach for radionuclides. In effect there is treatment and it gets to the same place as a TBEL. Or we could even call it a TBEL, although DOE will say that the Administrator's decision's reason should extend beyond Bear Creek. But I don't think we have time to wait on the review that may reverse the decision on TBEL and antidegradation. There will be treatment and DOE will no be able to avoid treatment using a mixing zone.

I have been involved with the Zone 2 ROD dispute and my recollection was that Karrie-Jo Shell was not sure about not using a mixing zone for radionuclides in the Clinch River where the flow is very large. . We worked this issue in 2018 when Doe said I would proceed without an ESD. There was discussion up until October. But I think the discussion stopped because it was parallel to the FFS dispute and the focus shifted to writing the Regional Administrator's decision issued in March 2019. But I attached at TDEC response to a document EPA had Karrie-Jo Shell prepare. I refence places in the document to show there was no mixing zone assumed. I don't think the state rule had been amended yet. The important point in the attached document with notes and cited and quoted language from the state rules and EPA guidance is that the state rule used to interpret the state water quality standards allows a mixing zone even for bioaccumulative pollutants unless there is a measure problem with fish tissue exceeding the 1×10^{-5} risk. The state did not write its rule to prohibit mixing zones for bioaccumulative pollutants if there was not a fish consumption problem. And I think in the area of CWA water quality standards the states have the authority to make the standards. And EPA approves the state standards, but EPA does not make its own standards. EPA would not be following its guidance if it determines the state water quality standards allow a mixing zone and then decides not to use it. EPA does raise the issue of prohibiting mixing zones for bioaccumulative pollutants but it also recognizes that a restriction can be used rather than an outright prohibition. Tennessee used a restriction.

If EPA wants to maintain its position I think an explanation is required based on the points I raise.

For Bear Creek there can be a mixing zone but it would be set near the discharge and not extend for miles downstream. Given the position of the new landfill the flow a the likely discharge point would be below km 9.2 and above km 7.87 would provide some dilution but not 64 times. The site is proposed to be place between NT-10 and NT-11 in about the middle of Zone 2 in Bear Creek Valley. The TDEC comments on the D2 FFS dated March 31, 2016 placing it in informal dispute included a table that assume the stream flow at 9.2 under the lowest flow conditions was 311 liters per minute and the discharge was 113 liters per minute providing dilution a little less than 3-to-1.

Tony Poole makes an argument against using the low flow calculations. I am not sure what it is, however. It is most conservative The operation at EMWMF has released batches from the contact water ponds and the releases can be times to higher flow conditions. But we would not want there to be discharge in batches but a

continuous discharge I think. The provision about how to measure compliance with an AWQC is in the same rule as the mixing zone provision, 0400-4-03-.05.

Thanks,



Steven R. Stout | Senior Counsel
Office of the General Counsel
Tennessee Tower, 2nd Floor
312 Rosa L. Parks Ave., Nashville, TN 37243
p. 615-532-0138 c. 615-571-9328
steven.stout@tn.gov
tn.gov/environment
tnstateparks.com